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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/751,505	01/06/2004	Tatsuo Saishu	246188US2SRD DIV	3328
22850	7590	11/16/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			LAO, LUN YI	
			ART UNIT	PAPER NUMBER
			2673	

DATE MAILED: 11/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/751,505

Applicant(s)

SAISHU ET AL.

Examiner

Lao Y Lun

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 1,3,8,10,15 and 17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 2, 4-7, 9, 11-14, 16 and 18-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
 - 2) ☒ Certified copies of the priority documents have been received in Application No. 09/942,743.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/25/2004, 5/4/200
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 2, 4, 9, 11, 16 and 18 provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 22-24 of copending Application No. 09/942,743. Although the conflicting claims are not identical, they are not patentably distinct from each other because they both claim a liquid crystal display comprising: a ferroelectric liquid crystal material which is held between a pair of electrode substrates and whose optical response is asymmetric with respect to the polarity of a voltage applied; a signal applying section which applies an image signal to a pixel of the liquid crystal material for every three or more fields; and a polarity controller which reverses the polarity of the image signal in one frame period, wherein the polarity controller being configured to apply the image signal of a first polarity(positive) of each field in a first one of two successive periods obtained by dividing the frame period, and to apply the image signal of a second polarity

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opposite(negative) to the first polarity(positive) and of fixed amplitudes being applied for each subsequent field in a second one of the two successive periods(see claims 22-24).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

3. Claims 5, 12 and 19 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 22-24 of copending Application No. 09/942,743 in view of Hashimoto et al(6,295,043).

The copending application(claims 22-24) fail to disclose the second period(negative period) having at least two consecutive fields.

Hashimoto et al teach an LCD display comprising a second period(negative period) with at least two consecutive fields(see figure 13A). It would have been obvious to have modified the copending application with the teaching of Hashimoto et al, since the polarity can be inverted every arbitrary fields(see figures 13A-13C and abstract).

This is a provisional obviousness-type double patenting rejection.

4. Claims 6-7, 13-14 and 20-21 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 22-24 of copending Application No. 09/942,743 in view of Hashimoto et al(6,295,043) and Kuribayashi et al(4,709,995),

The copending application(claims 22-24) fail to disclose fields having different time lengths.

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Kuribayashi et al teach a ferroelectric liquid crystal display having a plurality of fields having different time lengths(see figures 3, 6; abstract; column 5, lines 39-68 and column 1-23). It would have been obvious to have modified Asao et al as modified with the teaching of the copending application, so as to provide different levels of grayscale on a display.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 2, 4, 9, 11, 16 and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Asao et al(US-20030107538).

As to claims 2, 4, 9, 11, 16 and 18, Asao et al teach a liquid crystal display comprising: a ferroelectric liquid crystal material which is held between a pair of electrode(82a, 82b) substrates and whose optical response is asymmetric with respect to the polarity of a voltage applied(see figures 7, 10 and paragraphs #181-183); a signal applying section which applies an image signal to a pixel of the liquid crystal material for every three or more fields; and a polarity controller which reverses the polarity of the image signal in one frame period, wherein the polarity controller being

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configured to apply the image signal of a first polarity(positive) of each field in a first one of two successive periods obtained by dividing the frame period, and to apply the image signal of a second polarity opposite(negative) to the first polarity(positive) and of fixed amplitudes being applied for each subsequent field in a second one of the two successive periods(see figures 7, 17 and paragraphs #259-263).

As to claim 9. Asao et al teach an LCD display having a plurality of signal lines(S1-S5); plurality of scanning lines(G1-G5) and plurality of switches(95)(see figure 11).

As to claims 4, 11 and 18, Asao et al teach the second polarity(negative) is a polarity in which a smaller optical response of the ferroelectric liquid crystal material(see figure 7 and paragraph 160).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 5, 12 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asao et al in view of Hashimoto et al(6,295,043).

Asao et al teach first period(positive period) having at least one field other than the consecutive two fields(see figure 17). Asao et al fail to disclose the second period(negative period) having at least two consecutive fields.

Hashimoto et al teach an LCD display comprising a second period(negative period) with at least two consecutive fields(see figure 13A). It would have been obvious to have modified Asao et al with the teaching of Hashimoto et al, since the polarity can be inverted every arbitrary fields(see figures 13A-13C and abstract).

9. Claim 6 -7, 13-14 and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asao et al in view of Hashimoto et al and Kuribayashi et al(4,709,995),

Asao et al as modified fail to disclose fields having different time lengths.

Kuribayashi et al teach a ferroelectric liquid crystal display having a plurality of fields having different time lengths(see figures 3, 6; abstract; column 5, lines 39-68 and column 1-23). It would have been obvious to have modified Asao et al as modified with the teaching of Kuribayashi et al, so as to provide different levels of grayscale on a display.

As to claims 7, 14 and 21, Asao et al teach the second polarity(negative) is a polarity in which a smaller optical response of the ferroelectric liquid crystal material(see figure 7 and paragraph 160).

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Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Asao et al(6,809,7171) teach a ferroelectric liquid crystal display for reversing the polarity of image signals.

Saishu(EP 1,193,680) teaches a ferroelectric liquid crystal material having an asymmetric polarity response property.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lun-yi, Lao whose telephone number is (703) 305-4873.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala, can be reached at (703) 305-4938.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

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November 12, 2004

Lun-yi Lao

Lun-yi Lao

Primary Examiner